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DEVELOPMENTS IN ILLINOIS AND INDIANA IN 1947¹

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ABSTRACT

In all, 2,727 wells were drilled for oil and gas in Illinois and Indiana in 1947 as compared with 2,870 in 1946, a decrease of 5 per cent. Total oil production decreased 11 per cent from 82,128,000 barrels in 1946 to 72,900,000 barrels in 1947. Wildcat drilling increased from 760 completions in 1946 to 792 completions in 1947. Forty-four new pools and approximately 76 extensions were discovered in the two states in 1947 as a result of wildcat drilling.

The new production found in 1947 was almost entirely from Mississippian strata. Little deep drilling was done, and no major amounts of oil were produced from strata below the Mississippian. A "Trenton" pool, Woburn South, was discovered in Bond County, Illinois, which had six producing wells at the end of the year. Drilling is expected to continue in 1948 at nearly the same rate as in 1947.

INTRODUCTION

The area discussed in this paper includes Illinois and Indiana. Most of the oil and gas drilling was done in the southern part of Illinois and the southwestern part of Indiana. Oil and gas drilling in the two states decreased 5 per cent, from 2,870 completions in 1946 to 2,727 completions in 1947. Oil production decreased 11 per cent, from 82,128,000 barrels in 1946 to 72,900,000 barrels in 1947. Wildcat drilling increased from 760 completions in 1946 to 792 completions in 1947. Forty-four new pools and approximately 75 extensions to old pools were discovered in the two states in 1947 as a result of wildcat drilling.

The new production discovered in 1947 was largely from Mississippian strata. Of the 44 new pools discovered, three were in Pennsylvanian sandstones, one was in the "Trenton" (Ordovician) limestone, and the remaining 40 were in Mississippian sandstones and limestones; of these, 18 were in Chester sandstones and 22 were in Lower Mississippian limestone or sandstones.

Little deep drilling was done and no major amounts of oil were produced from strata below the Mississippian. The one new pre-Mississippian pool, Woburn South in Bond County, Illinois, had six producing wells in the "Trenton" at the end of the year.

Drilling is expected to continue during 1948 at nearly the same rate as in 1947.

The details of development are discussed separately for each state.

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TABLE I
DISCOVERY POOLS OF NEW POOLS IN ILLINOIS IN 1947

Pool	County	Company and Farm	Location	Total Depth (Feet)	Producing Formation	Depth to Top (Feet)	Initial Production (Barrels) ^a
1. Ab Late	Gallatin	Sohio, J. Lynch ¹	32-8S-10E	2,790	Renault	2,655	149
2. Beman East	Lawrence	S. Zaneti, H. W. Mahrenholz ¹	19-3N-10W	1,904	McClosky	1,882	190; 175
3. Berryville	Wabash	British American, A. Higgins ¹	36-2N-14W	2,903	McClosky	2,901	223
4. Billie Grove North	Effingham	Gilliam & Aspin, E. Adams ¹	10-6N-7E	2,378	McClosky	2,168	102; 30
5. Bone Gap South	Edwards	Inland Producers, G. Hartas ¹	19-1S-14W	3,126	Cypress	2,712	498; 80
6. Burnt Prairie South	White	British American, Duckworth ¹	7-4S-9E	3,552	Lower Ohara	3,417	72
7. Centerville North	White	F. Heidt, C. & M. Endicott ¹	28-3S-10E	3,233	Bethel	2,991	38; 50
8. Concord Central	White	W. O. Allen, Ackerman ¹	4-7S-10E	2,913	Aux Vases	2,900	135
9. Cottonwood	Gallatin	Nat'l. Assoc. Pet., J. C. More ^{1-A}	33-7S-9E	2,323	Tar Springs	2,314	6
10. Divide East	Jefferson	Nat'l. Assoc. Pet., D. McElroy ¹	17-1S-4E	2,647	Aux Vases	2,637	109; 17
11. Eliette	Effingham	Nat'l. Assoc. Pet., A. Jacobs ¹	24-6N-6E	2,866	McClosky	2,823	118; 200
12. Elliottstown	Effingham	Gulf (Schock), J. M. Schultz ¹	32-7N-7E	2,884	Rosalie	2,730	62; 20
13. Fairfield East	Wayne	Tuley & Carter, A. Martin ¹	4-2S-8E	3,200	Aux Vases	3,178	16
14. Half Moon	Wayne	Collins Bros., M. Flowers ¹	27-1S-9E	3,403	McClosky	3,353	60; 40
15. Helena	Lawrence	Fox & Fox, E. Bass ¹	11-2N-13W	1,803	Waltersburg	1,776	12; 100
16. Herald East	White	J. Reznik, H. Grant ¹	13-7S-9E	2,300	Waltersburg	2,291	196
17. Hunt City South	Jasper	Robinson & Puckett, G. Dillman ¹	18-7N-11E	2,460	McClosky	2,436	10; 6
18. Iowa South	Clay	Robinson & Puckett, B. Colclasure ¹	11-4N-5E	2,703	McClosky	2,581	30; 40
19. Iuka	Marion	J. M. Gilliam, H. Eble ¹	14-2N-4E	2,886	Site, Geneva	2,702	232; 100
20. Kenner North	Clay	Nat'l. Assoc. Pet., N. O. Golden ¹	17-3N-6E	2,772	Bethel	2,758	87
21. Kenner West	Clay	Phillips Pet., E. Shaker ¹	23-3N-5E	3,038	Cypress	2,885	95; 70
22. Lexington	Wauash	F. J. Fleming et al., W. Berberich ¹	26-1S-14W	3,016	McClosky	2,966	250
23. Massillon South	Edwards	Magnolia, L. W. Wilson ¹	18-1S-16E	3,391	Lower Ohara	3,313	4; 1
24. Miletus	Marion	Nat'l. Assoc. Pet., G. Boye et al. ¹	21-4N-4E	2,212	Aux Vases	2,199	38; 32
25. Newton West	Jasper	McCullough Drile, Winterrowd ¹	10-6N-9E	3,016	McClosky	2,991	8; 18
26. Stanford West	Clay	Nat'l. Assoc. Pet., O. Hickle ¹	33-3N-7E	3,047	McClosky	3,031	305
27. Westfield East	Clark	Van Tarle, Tarble Bros. ³	2-11N-14W	4,228	Pennsylvanian	418	50
28. Woburn South	Bond	L. Horton, W. Kokorudz ¹	21-6N-2W	3,167	"Trenton,"	3,151	70

^a Oil and water.



TABLE II
DISCOVERY WELLS OF EXTENSIONS TO POOLS IN ILLINOIS IN 1947

Pool ¹	County	Company	Farm	Location	Total Depth	Producing Formation	Top of Pay	Initial Production Bbls. ²
1. Albion Consol.	Edwards	N. Redwine Wm. Bell	McKinley-Walker Comm. 1 F. Fieber 1	31-1S-14W 3-2S-14W	3,198	McClosky Rosiclare {McClosky	3,155 3,126 3,165	25; 1
2. Albion East			Burkett 1	5-3N-2W	1,150	Bethel	1,147	42; 30
3. Beaver Creek South	Clinton	A. M. Fowley & A. Jackson	Lindsay 1	20-3N-10W	1,907	Aux Vases	1,809	5; 5
4. Beman East	Lawrence	S. Zanetis				Rosiclare	1,860	2; 20
5. Bible Grove East	Clay	Calvert & Willis	L. Shields 1	2-3S-7E	2,953	McClosky	2,876	10; 20
6. Bible Grove East	Clay	N. V. Duncan	A. A. Harmon Heirs 1	2-3S-7E	2,978	Aux Vases	2,783	11; 5
7. Bone Cap South	Edwards	E. Witt (D. Miller)	F. S. Racster 1	18-1S-14W	3,191	McClosky	3,058	76; 15
8. Bonpas	Richland	Gilliam et al.	J. Provines 1	34-3N-14W	3,136	McClosky	3,128	30; 180
9. Boyleson Consol.	Wayne	B. J. Taylor et al.	A. R. Burkett 1	18-1S-7E	3,345	Aux Vases	3,155	40; 150
10. Boyleson Consol.	Wayne	Robinson & Puckett	Henson Cons. 1	30-1S-8E	3,453	Rosiclare	3,259	
11. Browns South	Wabash	Cherry & Kidd	Gray-Tarquary 1	27-1S-14W	2,903	McClosky	2,876	30; 60
12. Browns South	Edwards	Lynn, Calvert & Willis	A. J. Messman 1	9-2S-14W	3,075	McClosky	2,955	41; 15
13. Calhoun	Richland	O. Weston	E. O. Kirk 1	29-3N-10E	3,168	Bethel	2,828	2,828
14. Calvin North	White	D. Miller Drig.	Johnson 1	6-4S-11E	3,204	Aux Vases	2,950	
15. Cisne	Wayne	N. Redwine	W. Lusk 1	3-1S-7E	3,310	Lower Ohara	3,048	40
16. Clay City Consol.	Wayne	Robinson & Puckett	M. Shackford 1	2-1N-SE	3,001	Lower Ohara	3,151	17; 33
17. Clay City Consol.	Wayne	D. State et al.	F. Pettijohn 1	2-1N-7E	3,072	Rosiclare	3,072	200
18. Clay City Consol.	Wayne	D. Slape	S. O. Hossett 1	29-2N-8E	2,986	Aux Vases	2,973	95
19. Clay City Consol.	Wayne	Tuley & Carter	J. O. Smith 1	3-1S-8E	3,010	Rosiclare	3,003	5; trace
20. Clay City Consol.	Clay	W. Bell	C. T. Smith 1	35-3N-8E	3,087	McClosky	3,070	72
21. Clay City Consol.	Wayne	Robinson & Puckett	D. Perardi 1	7-1S-8E	3,074	Aux Vases	2,882	73
22. Cottonwood	Gallatin	Mealy & Wolfe	L. M. Mills 1	7-1S-8E	3,135	Aux Vases	3,113	110
23. Cottonwood	Edwards	G. Wickham	Mason-Schroeder 1	22-2S-14W	2,331	Tar Springs	2,280	19,500,000 cu. ft.
24. Dubois	Franklin	W. O. Allen	J. L. Kashan 1	18-3S-1W	3,009	Bethel	2,751	32
25. Ewing	Wayne	Sohio	Bosserman 1	5-5S-3E	1,336	Cypress	1,185	5,200,000 cu. ft.
26. Geff West	Wayne	Tuley & Carter	J. C. Stanley 1	18-1S-3E	2,841	Aux Vases	2,830	117
27. Geff West	Wayne	A. J. Slagter	J. T. Haynes 1	4-1S-7E	3,197	Aux Vases	3,083	80
28. Geff West	Nation Oil	George & Wharber	W. G. Cline 1	10-1S-7E	3,172	Aux Vases	3,105	42;
29. Garyville West	White	Central Pipe Line	Robinson Heirs 1	27-3S-10E	3,110	Aux Vases	3,098	3; 25
30. Hall Moon	Wayne	B. M. Heath	W. C. Turner 1	23-1S-9E	2,871	Cypress	2,831	63
31. Herald	White	T. Pool 1	T. Pool 1	25-0S-9E	3,375	Rosiclare	3,340	66; 40
32. Herald East	White	M. E. Austin 1	M. E. Austin 1	32-6S-9E	3,140	Lower Ohara	2,962	121; 40
33. Herald East	White	Eubanks 1	Eubanks 1	18-7S-10E	2,500	Degenia	1,920	66; 20
34. Hoosier North	Clay	L. Stanley 1	L. Stanley 1	35-5N-7E	2,930	Aux Vases	2,918	89
					2,960	McClosky	2,853	71; 15

TABLE II—(continued)

Pool	County	Company	Farm	Location	Total Depth	Producing Formation	Top of Pay	Initial Production Bbl. ^a
35.	Johnsonville Consol.	Z. H. Ginestaff ¹	25-1N-6E	3,213	McClosky	3,268	134	
36.	Johnsonville West	Puritan Pet.	24-1N-5E	2,973	Aux. Vases	2,954	200+	65
37.	Johnsonville West	Taylor Drig.	26-1N-5E	3,064	McClosky	120		
38.	Junction	C. E. Skiles	9-0S-9E	3,087				
39.	Junction North	Galatin	34-8S-1W	2,012	Pennsylvanian	1,429	17	
40.	Keeensburg Consol.	Galatin	25-2S-1W	1,587				
41.	Kenner	Ill.-Mid-Continent	25-2S-1W	2,874	Tar Springs	1,504	40	
42.	Kenner North	Clay	36-3N-5E	2,985	Rosciare	2,096	15	15
43.	Lancaster East	Clay	36-3N-5E	2,985		2,875	655	2
44.	Leech Consol.	Waabash	35-2N-13W	2,863	Aux. Vases	2,779	20	
45.	Lillyville	Waabash	20-3N-9E	2,759	Rosciare	2,662	150	
46.	Maud North	Waabash	6-8N-7E	3,478				
47.	Maud North	Hayes & Wolfe	16-1S-13W	2,416	McClosky	3,377	43	20
48.	Maurine North	White	20-1S-13W	2,668	Bethel	2,933	90	
49.	Mt. Erie South	White	36-5S-10E	2,939	Rosciare	2,886	34	
50.	New Harmony-Griffin Consol.	White	23-1S-8E	3,107	Paint Creek	2,859	32	1
51.	Noble	Richland	19-5S-14W	3,158	Lower Ohara	2,812	97	
52.	Noble North	Richland	3,117	Rosciare	3,907	113		
53.	Oiney East	Clay	14-3N-8E	3,090				
54.	Passport	Clay	13-4N-10E	3,091	Rosciare	3,002	84	14
55.	Reiland	Gallatin	2-4N-8E	3,082	Cypress	2,554	18	2
56.	Rural Hill	Hamilton	20-7S-8E	3,025	McClosky	3,068	23	50
57.	Sailor Springs Consol.	Clay	20-6S-6E	2,115	McClosky	720 (10F)		
58.	Salem	E. A. Obering	15-3N-7E	3,102	Watersburg	2,084	30	
59.	Salem	Schally & Silvka	20-3N-7E	2,990	Aux. Vases	3,180	52	71
60.	Shattuc	Marion	21-1N-2E	2,992	McClosky	2,049	84	
61.	Shelbyville	Clinton	21-1N-2E	1,928	McClosky	2,978	105	11
62.	Storms	Shelby	28-2N-1W	1,935	Bethel	1,918	55	75
63.	White	White	14-11N-4E	1,205	Cypress	1,920	11	30
64.	Trumbull	Ashland & Buchman Pure	18-6S-10E	2,084	Cypress	1,288	44	
65.	Trumbull	White	20-5S-9E	3,002	Aux. Vases	1,866	69	43
66.	Westfield East	Clark	6-5S-9E	3,032	McClosky	3,027	50	
67.	Willow Hill Consol.	J. W. Williams	30-12N-14W	3,352	(Aux. Vases)	3,104	6	31
68.	Woburn South	F. Fessler	23-7N-10E	3,382	Rosciare	3,288	48	18
69.	Woodlawn	L. J. McOrd	16-6N-2W	400	McClosky	3,288		
		L. F. Stocklin	2,597	Pennsylvanian	453	3		
		O. Watkins et al.	3,179	Rosciare	2,549	87		
		C. E. Townsend	2,036	"Fronton,"	3,158	45		
				Bethel	2,026	72		

^a Oil and water.

TABLE III. DISCOVERY WELLS OF ADDITIONAL PRODUCING ZONES IN POOLS IN ILLINOIS IN 1947

Pool	County	Company and Farm	Location	Total Depth (feet)	Producing Formation	Depth to T_u^b (feet)	Initial Production (Barrels) ^a
I	Albion East	W. Bell, F. Fischer	31-2S-14W	3,231	Rosiclar ^b	3,126	4,213
2	Bernier East	S. Zanecini, Lindsay	20-3N-10W	1,007	Aux Vases ^c , Rosiclar	1,860, 1,860	30
3	Berryville	Phillips Pet.	23-5N-14W	3,013	Rosiclar	2,911	150;
4	Bible Grove East	Calvert & Willis, L. Shields	23-5N-7E	2,953	Mclosky	2,835	2
5	Bible Grove East	N. V. Duncan, A. A. Harmon	10-6N-7E	2,973	Aux Vases	2,733	10;
6	Bible Grove North	Superior, C. Kluthe	10-6N-7E	2,887	Cypress	2,533	50
7	Bible Grove North	T. W. Duncan, Harden-Webster	10-6N-7E	2,944	Rosiclar	2,835	1+
8	Bible Grove South	City Services, L. Thread	20-5N-7E	2,758	Cypress	2,392	26
9	Bone Gap	E. Witt, D. Miller, I. S. Raster	19-1S-11W	3,316	Rosiclar	3,168	20
10	Bone Gap South	E. Witt, D. Miller, I. S. Raster	19-1S-14W	3,090	Aux Vases	3,015	50
11	Bone Gap South	Rotter, Reeves, Lobell, Bedell	19-1S-14W	3,191	Mclosky	3,038	125
12	Browns	Cherry & Kidd, Gray-Newman	4-2S-14W	3,010	Rosiclar ^b	3,010	76;
13	Browns	Lynn, Calvert & Willis; A. J. Messman	4-2S-14W	3,031	Tar Springs ^b	2,973	15
14	Brown's South	D. Miller Drig., Johnson	9-2S-14W	3,075	Aux Vases ^c	2,304	40
15	Calvin North	Great Lakes Carbon	6-5-11E	3,204	Lower Ohara	3,038	11
16	Concord Central	C. E. Brehm, A. William	4-2S-10E	3,053	Cypress, McClosky	2,067	40
17	Concord North	G. Wiegman, G. Broster	10-6S-10E	3,071	Lower Ohara ^b	2,070	9;
18	Cowling	W. O. Allen, J. L. Kastan	34-2S-14W	2,010	Palestine	3,033	9
19	Dubois	Nat'l Assoc. Pet. C. Jacobs	13-3N-6E	3,336	Waltersburg	2,001	248
20	Ellette	Heuman & Gher, H. E. Perkins	24-0N-6E	2,483	Cypress	1,185	5,200,000 cu. ft.
21	Ellery South	W. O. Allen, Brimble-Combe	33-2S-10E	3,340	Cypress	2,473	10
22	Epworth East	Ohio, Bosselman	28-5S-10E	3,127	Tar Springs ^b	3,209	20;
23	Ewing	A. J. Slater, Jr., Barnard	5-2S-3E	3,814	Aux Vases	2,339	5
24	Geff West	A. J. Slater, Evans	4-1S-7E	3,214	McClosky ^b	2,830	117
25	Geff West	S. C. Vining, Sander	4-1S-7E	3,205	Rosiclar	3,199	7;
26	Gravely	George & Wether, W. C. Turner	23-1S-9E	3,375	Waltersburg	3,202	30
27	Hall Moon	B. M. Heath, M. A. Austin	32-0S-9E	2,560	Rosiclar	3,392	153
28	Herald East	C. E. Stiles, Williams	13-7S-9E	2,414	Deagonia	1,920	60;
29	Herald East	J. Rennik, C. Glover	24-7S-9E	3,093	Tar Springs ^b	2,397	20;
30	Herald East	J. W. Rudy, P. W. Bateman	26-5N-7E	2,503	Aux Vases	2,934	20;
31	Hoosier North	Evans & Barrow, L. Brooks	35-5N-7E	2,505	Cypress	2,505	194
32	Hoosier North	Nat'l Assoc. Pet. C. Wattles	35-5N-7E	2,995	Lower Ohara ^b	2,581	28
33	Hoosier North	C. C. Clark, Daily	11-8S-10E	2,093	McClosky	2,581	20
34	Inman North	Coy & Ashland, Foster	10-8S-9E	2,300	Pennsylvanian	2,093	24
35	Inman North	Coy & Ashland, Foster	11-8S-9E	2,524	Harrisburg	1,920	60;
36	Inman North	Coy & Ashland, Foster	11-8S-9E	2,524	Cypress	2,330	24;
37	Inman North	Kingswood, Schif	11-8S-9E	2,542	Tar Springs ^b	2,510	50
38	Inman West	Coy & Ashland, Foster	11-8S-9E	2,957	Pennsylvanian	1,915	35
39	Junction North	C. E. Stiles, Stinson	0-9S-9E	2,012	Pennsylvanian	1,440	32;
40	Junction North	Delta Drig., Ingleton	34-8S-9E	1,587	Pennsylvanian	1,584	17
41	Kenner	A. J. Sliger, C. Tackett	36-3N-5E	2,987	Rosiclar	2,875	65;
42	Kenner North	Nat'l Assoc. Pet. E. Spiller	17-3N-5E	2,863	Aux Vases	2,779	2
43	Kenner North	Phillips Pet., Colasaur	17-3N-6E	3,041	McClosky	2,904	308
44	Kenner West	Phillips Pet., Randall	23-3N-5E	3,047	Palestine ^b	2,880	32;
45	Kenner West	S. H. Kaiser	16-4N-4E	3,006	Bethel	2,703	32;
46	Lancaster Central	Nu-Enamel, C. H. Barnes	7-1N-13W	2,854	Lower Ohara	2,739	168;
47	Lancaster Central	Nu-Enamel, C. F. Higgins	7-1N-13W	2,815	McClosky ^b	2,888	56;
48	Lancaster East	Arvin Drig., E. Alka	35-5N-13W	2,750	Rosiclar	2,662	6
49	Main	W. H. Wright, W. Walters	19-7N-12W	1,833	Salem	1,817	20;
50	Maud	III-Mid-Continent, T. Grunden	35-1S-13W	2,368	Cypress	2,227	2
51	Maud North	Hayes & Wolfe, Peter "A"	20-1S-13W	2,041	Rosiclar	2,839	20;
52	Maurine North	J. H. Gillham, Slemaker	36-5S-10E	3,125	Rosiclar	3,033	1;
53	Miletus	S. H. Kaiser	16-4N-4E	2,166	Bethel	2,152	10;
54	Marion	Nat'l Assoc. Pet. W. Adams	21-4N-4E	2,448	McClosky ^b	2,347	47
55	New Haven West	Sohio, J. W. Telford	23-7S-10E	2,936	Lower Ohara	2,739	47
56	Roland	Synclair Wyoming, C. D. Reddy	27-5S-9E	2,947	Clore ^b	2,944	26;
57	Russellville (gas)	Lawrence	18-4N-10W	1,570	McClosky	1,531	20;
58	Sailor Spring Consol.	Fulk, Stanford	9-3N-7E	2,939	Lower Ohara	2,943	1;
59	Shattuck	T. M. Conley, E. Koister	27-2N-1W	1,438	Paint Creek	1,406	44
60	Stanford West	Nat'l Assoc. Pet. J. N. Klein	3-3N-7E	3,083	Rosiclar ^b	2,975	10;
61	Trumbull	E. Witt, J. W. Williams	6-5N-9E	3,382	McClosky	3,288	40;
62	West Frankfort South	H. Ames et al., Thompson	30-7S-3E	2,731	Aux Vases	2,875	48;
63	West Frankfort South	R. Bartimes et al., West Frankfort Pack	30-7S-3E	2,912	McClosky	2,733	15;
64	Whittington West	Franklin	14-5S-2E	2,786	Rosiclar	2,779	248+trace
65	Woodlawn	Jefferson	24-2S-1E	2,217	Rosiclar	2,195	1

^a Oil and water. ^b Dual completion. ^c Triple completion.

ILLINOIS

By ALFRED H. BELL

In Illinois, 2,046 wells were completed for oil and gas in 1947, a decrease of 13 per cent from 1946. Drilling resulted in 1,071 oil wells, 9 gas wells, and 966 dry holes. Of the 536⁴ wildcat wells drilled, 28 discovered pools and 69 discovered extensions to pools (Tables I and II). In addition, 65 wells, most of which can not be designated properly as exploratory wells, discovered additional producing zones in known producing areas (Table III).

The geographic pattern of drilling followed that prevalent in recent years, the greatest number of completions by counties being in Wabash (301) followed by Wayne (253), White (223), and Clay (196) counties. Wells in Clay County averaged 160 barrels initial production compared with a state average of 100 barrels.

The pools with the greatest numbers of well completions in 1947 were as follows: Clay City Consolidated, 120 completions; New Harmony Consolidated, 63 completions; Willow Hill Consolidated, 63 completions; Allendale, 61 completions; and Sailor Springs Consolidated, 52 completions.

Total oil production in Illinois in 1947 was 66,459,000 barrels as compared with 75,297,000 barrels in 1946, a decrease of 13 per cent. Average daily production in 1947 was 182,000 barrels. Average daily production, by months during the year varied from 193,000 barrels in January to 175,000 barrels in August and November.

EXPLORATORY DRILLING

As may be noted on the map (Fig. 1) the new pools discovered were all within short distances of previous production so that no new regions were opened for exploration and development during the year. One of the new pools, Kenner West in Clay County, Illinois (No. 21, Fig. 1) is located on a structure which was mapped on outcropping Pennsylvanian strata and recommended for testing by the Illinois Geological Survey in *Report of Investigations 40*, published in 1936. At the end of the year, this pool had 21 wells producing from the Cypress and Bethel sandstones at approximate average depths of 2,570 feet and 2,705 feet, respectively. The pool had an approximate total production at the end of the year of 225,000 barrels. This was the most oil produced by any one of the 1947 discoveries. Kenner North, with 22 wells and a total production to the end of the year of 222,000 barrels, was a close second.

A list of some of the most noteworthy dry holes completed in 1947 is given in Table IV. Little deep testing was done. A well in Jersey County (Table IV, No. 15) located on the Lincoln fold which is adjacent to the Cap au Grés fault was drilled into the Lamotte sandstone (basal Cambrian). A well in Pike County,⁵ not listed in Table IV because it was not reported complete at the end of 1947, was drilled to the pre-Cambrian granite on top of the Pittsfield-Hadley anticline.

⁴ This figure does not include wells which tested additional producing zones in producing areas classified by Lahee as deeper-pool tests and shallower-pool tests.

⁵ Panhandle Eastern Pipe Line Company's Mumford No. 1, NE. $\frac{1}{4}$, NE. $\frac{1}{4}$, NW. $\frac{1}{4}$, Sec. 21, T. 5 S., R. 4 W., Pike County.

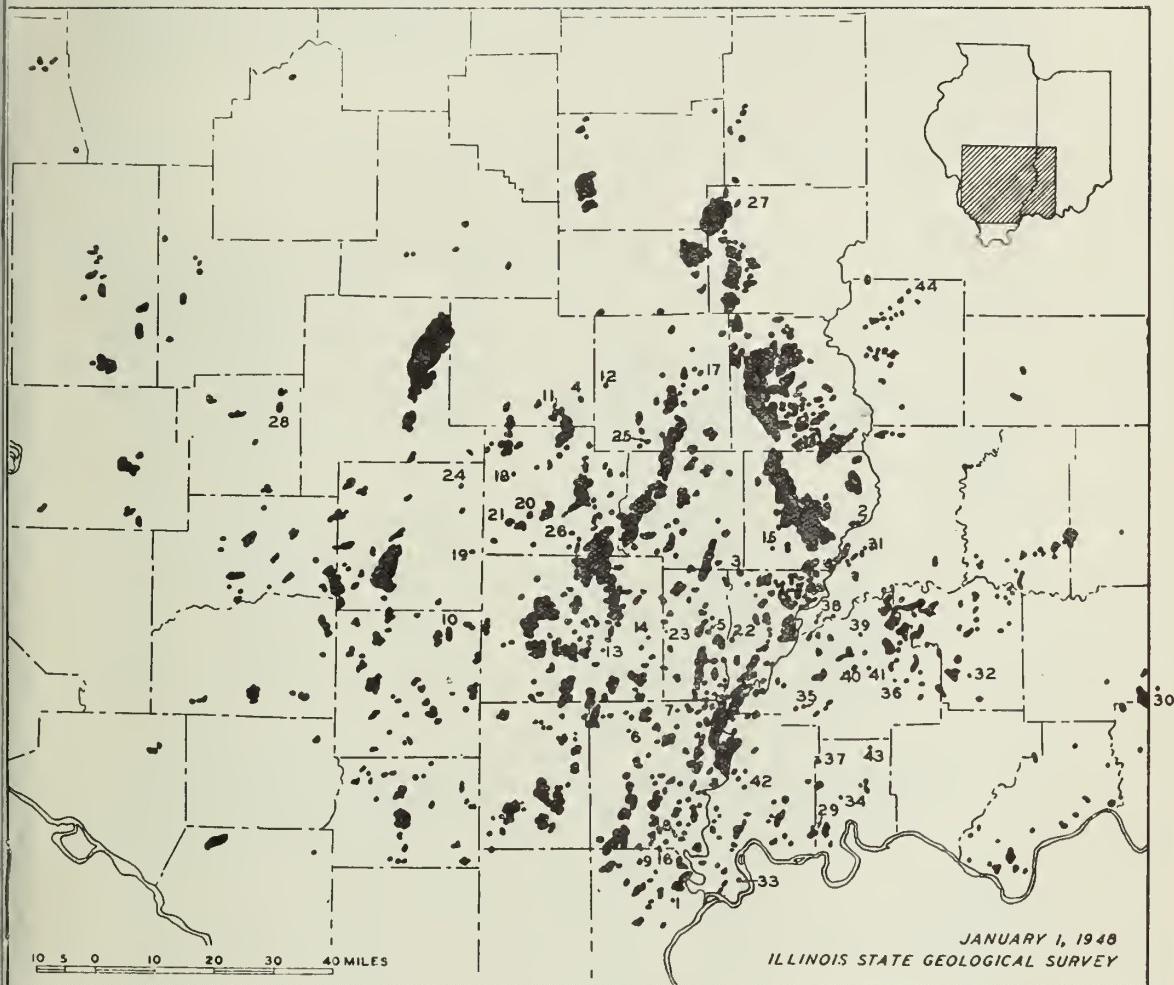


FIG. 1.—New pools discovered in 1947. All present and former oil- and gas-producing areas are shown in black. (See Tables I and VII for pool number identification.)

Depth to granite in this well was 2,221 feet, or an elevation of 1,401 feet below sea-level. The elevation of the top of the pre-Cambrian granite in a well 9 miles northwest, low on the north flank of the anticline, was 2,484 feet below sea-level, a difference of 1083 feet. Thus there appears to be a granite hill underlying the Pittsfield-Hadley anticline of considerably greater relief than that of the overlying sedimentary strata. This suggests that there may be granite hills under other major anticlinal structures of the Illinois area.

Some of the wells located in western Illinois (Table IV) were drilled in explora-

TABLE IV
SELECTED LIST OF DRY TESTS IN ILLINOIS IN 1947

Pool	County	Company and Farm	Location	Total Depth (Feet)	Deepest Formation	Depth to Top (Feet)
1.	Bond	H. Hoffman, G. Wilson "A" 3	24-4N-3W	2,460	Devonian	2,445
2.	Christian	Sun Oil, A. Ettinger 1	8-13N-1W	2,910	"Trenton"	2,788
3.	Clark	J. W. Menhall, Bubeck 2	11-0N-11W	2,580	Devonian	2,402
4.	Clark	J. W. Menhall, E. P. Daly 1	27-0N-11W	2,650	Devonian	2,478
5.	Bartels West	P. Mosebach et al., C. Meyer 2	18-1N-3W	2,520	Devonian	2,440
6.	Boulder	Texas, Defend-Gray Comm. 1	35-3N-2W	3,813	"Trenton"	3,711
7.	Carlyle	Murphy Oil, Hempen 1	10-2N-3W	2,014	Devonian	2,518
8.	Mattoon	Coles Blalock & Walters, Coles County Locker Co. 1	11-12N-7E	3,211	Devonian	3,172
9.	Mattoon	Coles B. A. Baker, H. Hagen 1	1-12N-7E	3,185	Devonian	3,130
10.	Coles	H. Sanders et al., R. M. Childress 1-B	30-13N-11E	2,325	"Trenton"	2,134
11.	Coles	E. Zink, Bales 1	3-12N-9E	2,185	Devonian	2,114
12.	Douglas	Burkett & Farnham, A. Brock 1	7-15N-14W	850	Devonian	799
13.	Fayette	Nat'l. Assoc. Pet.-Ashland, J. M. Dugan 1	23-6N-1W	3,900	"Trenton"	3,737
14.	Hancock	D. E. Lambert, W. Griffith 1	26-7N-8W	1,102	St. Peter	977
15.	Jersey	T. R. Kerwin et al., Legate 1	2-6N-13W	2,680	Lamotte	2,670
16.	Macoupin	Sun Oil, C. C. Alford 1	3-9N-6W	2,552	Glenwood	2,530
17.	Madison	Texas, Hosto 1	18-5N-5W	2,755	Plattin	2,744
18.	Miletus	Nat'l. Assoc. Pet., Lacy 5	21-4N-4E	3,950	Clear Creek	3,787
19.	Montgomery	J. Reznik, Monke 1	4-7N-5W	2,600	"Trenton"	2,490
20.	Washington	L. V. Horton, B. Huck 1	10-1S-2W	2,965	Devonian	2,870

TABLE V
WILDCAT WELLS DRILLED IN ILLINOIS IN 1947, CLASSIFIED BY METHOD OF LOCATION

Method of Location	Wildcat Near ^a		Wildcat Far ^b		Total Wildcats	Total Producers	Percentage Successful
	Total	Producers	Total	Producers			
Geology	296	69	169	22	465	91	19.5
Geophysics	1	0	2	0	3	0	0.0
Geology and Geophysics	12	0	26	6	38	6	15.8
Nonscientific	309	69	197	28	506	97	19.2
Unknown	3	0	23	0	26	0	0
Total	314	69	222	28	536	97	13.1

^a One half to 2 miles from production.

^b More than 2 miles from production.

tion for additional Silurian coral reefs, like the one that is productive of oil in the Marine pool, Madison County. Although as yet no additional oil-bearing reefs have been located, there is still a large unexplored territory.⁶

⁶ Heinz A. Lowenstam, "Marine Pool, Madison County, Illinois, Silurian Reef Producer," *Struct. Typ. Amer. Oil Fields*, Vol. III, Amer. Assoc. Petro. Geol. (1948), pp. 153-88.

METHODS OF EXPLORATION

The principal methods used in locating exploratory wells continued to be subsurface geology and the reflection seismograph (see Table V). The amount of seismograph work in Illinois increased 25 per cent from 284 crew-weeks in 1946 to 354 crew-weeks in 1947.

TABLE VI
GEOPHYSICAL EXPLORATION BY MONTHS IN ILLINOIS IN 1947

Period (1947)	Seismograph (a) (b)	Gravity	Resistivity
Jan.	8-32	1-4	1-4
Feb.	8-32	1-4	1-4
Mar.	8-32	1-4	1-4
Apr.	7-28	2-6	1-4
May	8-32	2-8	1-4
June	8-30	2-8	1-4
July	7-28	2-8	1-4
Aug.	7-28	2-8	1-4
Sept.	7-28	2-8	1-4
Oct.	6-26	1-6	1-4
Nov.	6-24	1-4	1-4
Dec.	6-24	1-4	1-4

^a First figure indicates number of crews working.

^b Second figure indicates number of working weeks completed.

INDIANA

BY RALPH E. ESAREY

Drilling activity in Indiana was the greatest since the opening of the Eastern Interior basin. In all, 666 wells were drilled, of which 340 were producing field wells, and 24 were successful wildcats. In addition, 6 wells opened extensions to oil fields, and 8 wells discovered oil in deeper or shallower sands in present pro-

TABLE VII
DISCOVERY WELLS OF NEW POOLS IN INDIANA IN 1947

Pool	County	Company and Farm	Location	Total Depth (Feet)	Producing Formation
20. Belknap	Vanderburgh	G. Engle, Helfrich 1	18-6S-11W	1,872	Waltersburg
30. Birdseye East	Crawford	H. A. Kays, St. Clair 1	31-2S-2W	995	Salem
31. Cathlinett	Knox	Zink et al., Halter 1	8-2N-10W	1,885	Rosiclare
32. Coe	Pike	R. Halbert, Ayrshire Coll. 1	30-2S-7W	1,423	Ste. Genevieve
33. College North	Posey	Calvert & Willis, Hastings 1	10-8S-14W	2,337	Ste. Genevieve
34. Evansville	Vanderburgh	Calvert & Willis, Engl 1	2-6S-11W	895	Pennsylvanian ss
35. Fleener	Gibson	C. A. Lynch, Fleener 1	22-3S-12W	1,880	Waltersburg
36. Francisco South	Gibson	J. Reznik, Weber 1	30-2S-9W	1,942	Ste. Genevieve
37. Martin	Vanderburgh	O'Neal et al., Wassmer 1	6-5S-11W	2,206	Cypress
38. Orrville	Knox	H. E. Ledbetter et al., Elkins 1	12-1S-12W	2,167	Bethel
39. Patoka East	Gibson	J. Savage, Hall 1	19-1S-10W	1,921	Cypress
40. Princeton New	Gibson	Princeton Mining, McCarty 1	13-2S-11W	2,184	Ste. Genevieve
41. Princeton South	Gibson	Kingwood Oil, Steiner 1	16-2S-10W	2,155	Ste. Genevieve
42. Solitude	Posey	Indiana Farm Bur., Highman Est. 1	31-5S-13W	3,039	Palestine
43. Stacer	Vanderburgh	J. Reznik, Feil 1	28-4S-10W	2,214	Ste. Genevieve
44. Standard	Sullivan	A. S. Reid, Jewell 1	22-9N-9W	643	Pennsylvanian

ducing areas. A total of 16 new fields was discovered: 5 in Gibson County, 4 in Vanderburgh, 2 in Posey, 2 in Knox, 1 in Pike, 1 in Crawford, and 1 in Sullivan County. The opening of the Evansville field created some excitement when substantial amounts of oil were produced from the Pennsylvanian sands at 900 feet. In this field, 17 wells were completed by the end of the year.

A great many wildcats were drilled around the edge of the basin where Chester sands vary from 500 to 1500 feet in depth. Several of the productive spots were

TABLE VIII
DISCOVERY WELLS OF EXTENSIONS TO POOLS IN INDIANA IN 1947

Pool	County	Company and Farm	Location	Total Depth (Feet)	Producing Formation
Decker	Knox	K. D. Holland, Ruppel 1	1-1N-11W	1,883	
Mt. Carmel	Gibson	I. Van Tuyl, Putnam 1	26-1S-12W	2,111	Bethel
New Boston	Perry	C. A. Busick, Gayer 1	5-6S-3W	516	Jackson
Owensville North	Gibson	Deep Vein Coal, Davis 2	6-2S-11W	2,326	McClosky
Owensville North	Gibson	Superior, Hardiman 2	18-2S-11W	2,371	McClosky
Princeton North	Gibson	George & Wrathen, Beloat 1	8-2S-10W	1,841	Cypress
Peru	Miami	J. Minneci, Butt 1	24-27N-4E	876	Trenton

TABLE IX
DISCOVERY WELLS OF ADDITIONAL PRODUCING ZONES IN POOLS IN INDIANA IN 1947

Pool	County	Company and Farm	Location	Total Depth (Feet)	Producing Formation
Dodds Bridge	Sullivan	M. Myers, Bradgon Heirs 1	5-8N-10W	590	Pennsylvanian
Hovey West	Posey	B. M. Heath, A. Gray Est. 1	36-7S-15W	2,167	Waltersburg
Mt. Carmel	Knox	H. E. Ledbetter, Steckler 7	22-1S-12W	2,095	Lower Ohara
Owensville	Gibson	Ashland-O'Neal, Bender 1	36-3S-12W	2,551	Bethel
Princeton North	Gibson	Princeton Mining, Hunt 1	8-2S-10W	1,944	Bethel
Rockport	Spencer	Port Rock Oil Co., Hayden 3-A	30-7S-6W	1,099	Cypress
Rockport	Spencer	D. Stinson, Axton 1	30-7S-6W	913	Tar Springs
Solitude	Posey	Indiana Farm Bur., M. Perry 2	31-5S-13W	3,016	McClosky
Springfield	Posey	Texas, Golden 1	19-1S-13W	2,126	Waltersburg
St. Thomas	Knox	E. Zink, Indiana Def.	19-2N-10W	1,662	Cypress

found in and around the old fields. The counties of Pike, Daviess, Sullivan, Spencer, Martin, Greene, and Warrick received more attention than in previous years. In seven of the new fields, oil was found in the Ste. Genevieve limestone, emphasizing the importance of that formation as a reservoir rock.

The number of gas wells reported during the year was 41, and all were producers. More than 4 million cubic feet of daily open flow was added to the gas production of the state by the opening of the four new fields. The Sun Oil Company opened a potential gas field in the Devonian limestone at 1,900 feet in Greene County, but the well was abandoned, eventually. The reported open flow was 2 million cubic feet per day. Another test may be drilled in the near future.

The "pocket" area (Posey, Vanderburgh, and Gibson counties) continued to be the most active from the standpoint of wells drilled and total number of completions. The Griffin field remained the largest producer, where 458 wells averaged 3,925 barrels per day throughout the year. The deepest tests made in the basin

were the Thomas No. 1 in Sullivan County which tested the St. Peter at depth of 4,328 feet, and the Bodine, No. 1, the deepest well stratigraphically, which was abandoned in the Shakopee dolomite at 2,417 feet in Fountain County. The pipeline runs for the year indicate that Indiana produced about 6,441,500 barrels of crude oil.

Outside the basin, a new strike in the old Trenton field near Peru, Miami County, caused a small flurry of activity. The field is an extension of an old productive area opened 50 years ago. Oil is produced from the Trenton limestone at 850 feet. The best well had an initial production of more than 100 barrels per day.

An additional pool producing from the Salem limestone was opened near Birdseye in Crawford County. It is an extension of the old Birdseye field abandoned many years ago. The top of the saturated zone is about 1,000 feet in depth. An interesting wildcat was drilled to the basement rock in Allen County, near Fort Wayne; the pre-Cambrian was reached at about 3,500 feet, without finding saturation in the overlying formations.

